

Express Mail No. EL141563 S

Docket No. 112/002/CON1

#4/A  
A9  
PATENT 114-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Group Art Unit: 1655

LIGHT, Elizabeth S.

Examiner: CHAKRABARTI

Serial No.:

Attorney Docket No.: 112/002/CON1

To be assigned

Filed: herewith

For: Method of Detecting Single Gene Copies *in situ*

**Preliminary Amendment for Filing with a New Application Under 37 CFR 1.53(b)**

Assistant Commissioner for Patents  
BOX PATENT APPLICATION  
Washington, DC 20231

Sir:

This Preliminary Amendment is filed concurrently with the filing of a continuation application under 37 CFR 1.53(b). Please amend the application as follows:

**In the claims:**

Cancel all claims 1-19.

Please add the following new claims 20-26:

AI

20. A composition comprising at least one cell containing target nucleic acid sequences associated with a product of an enzyme and a chromogen composition in said at least one cell wherein said product is individually associated with each of at least one of said target nucleic acid sequences and each of said target nucleic acid sequences associated with said product is separate from each other such that said product is distinguishable from the product associated with other copies of said target nucleic acid

sequences in the same cell such that one can determine the number of original copies of said target nucleic acid sequences in said at least one cell.

21. The composition according to claim 20 wherein said product is located at the target nucleic acid sequence of chromosomal DNA exclusively.
22. The composition according to claim 20 wherein the enzyme is a phosphatase or a peroxidase.
23. The composition according to claim 20 wherein the chromogen is NBT/BCIP, tetramethylbenzidine or diaminobenzidine.
24. The composition according to claim 20 wherein the enzyme is alkaline phosphatase and the chromogen is NBT/BCIP.
25. A method of detecting a target nucleic acid sequence in at least one cell comprising observing the location of a product of an enzyme and a chromogen composition, the product being individually associated with each of at least one of said target nucleic acid sequences and each of said target nucleic acid sequences associated with said product is separate from each other such that said product is distinguishable from the product associated with other copies of said target nucleic acid sequences in the same cell such that one can determine the number of original copies of said target nucleic acid sequences in said at least one cell.
26. The method according to claim 25 wherein said product is located at the target nucleic acid sequence of chromosomal DNA exclusively.

**In the specification:**

On page 1, insert the following paragraph at the top of the page, just before the phrase "Background of the Invention":

**--Cross Reference to Related Applications**

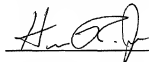
This application is a continuation of U.S. Serial No. 09/419,421 filed 10/15/99, abandoned.--

### Comments

The parent case Ser. No. 09/419,421 was subject to a Restriction Requirement which divided the application into Group I (claims 1-7), and Group II (claims 8-19). In the parent application claims 1-7 were elected for further prosecution, and the claims of Group II were withdrawn from consideration by the Examiner and subsequently cancelled without prejudice by Applicant. The filing of a continuation application accompaies this Preliminary Amendment, and new claims 20-26 are directed to the subject matter of claims 1, 5, 2-4, and 20-23, and is filed prior to the termination of proceedings or abandonment of parent case from which this claims priority.

Claim for Priority. This divisional application claims priority to US Ser. No. 09/419,421 filed 10/15/99, and priority is hereby claimed to its filing date.

Respectfully submitted,



Huw R. Jones, Esq.  
Attorney for Applicants  
Reg. No. 33,916

Date: 179422, 2001